

Pikes Peak REGIONAL Building Department

INTERNATIONAL ENERGY CONSERVATION CODE (IECC) RESIDENTIAL INSULATION CERTIFICATE - EL PASO COUNTY ONLY

This certificate is based on the 2015 International Energy Conservation Code (IECC), as amended by the 2017 Pikes Peak Regional Building Code. This certificate is applicable to One- and Two- family Dwellings as well as Townhouses, R2, R-3 and R-4 buildings three stories or less in height. *This certificate is required to be submitted as part of the plan review package.*

ADDRESS OR MASTER #: Carter3BR1S Habitat for Humanity

METHOD OF ENERGY CODE COMPLIANCE:

The IECC provide various option for compliance with minimum standards. Check the box to indicate the method of compliance.

- | | |
|---|---|
| <input checked="" type="checkbox"/> 1. Prescriptive Method (IECC Section R402.1.2) | <input type="checkbox"/> 5. Simulated Performance Alternative ² (IECC Section R405). Available only to design professionals licensed in the State of Colorado or by qualified persons as approved by the Building Official. |
| <input type="checkbox"/> 2. U-factor Alternative ¹ (IECC Section R402.1.4) | <input type="checkbox"/> 6. Energy Rating Index Compliance Alternative ² (IECC Section R406). Available only to design professionals licensed in the State of Colorado or by qualified persons as approved by the Building Official. |
| <input type="checkbox"/> 3. Total UA Alternative ¹ (IECC Section R402.1.5) | |
| <input type="checkbox"/> 4. ResCheck ¹ (IECC Section R402.1.5) | |

¹ Please attach documentation and calculations to substantiate compliance.

² If the Simulated Performance or ERI Alternative is selected please attach necessary documentation to show compliance. Complete third party documentation of compliance must be submitted at time of final inspection.

MINIMUM INSULATION VALUES FOR PRESCRIPTIVE METHOD

Door and Window U-Factor	Skylight U-Factor	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value/Depth	Crawlspace Wall R-Value
0.32	0.55	49	20 or 13+5	13/17	30	10/13	10/2 ft	15/19

INSULATION DATA:

Enter the appropriate values for the scope of work that coincide with the compliance method selected above. This data is required for all methods of compliance

<u>20</u> Wall R-Value (wood frame or mass)	<u>19</u> Crawlspace Wall R-Value
<u>49</u> Ceiling R-Value	<u>10</u> Slab perimeter R-Value (24" minimum)
<u> </u> Floor R-Value	<u>.32</u> Glazing U-Factor
<u> </u> Basement Wall R-Value	<u>.32</u> Door(s) U-Factor

INSPECTION REQUIREMENTS:

Section R402.4 of the IECC requires the thermal envelope to be sealed to limit infiltration. The IECC requires the thermal envelope to be visually inspected and tested to demonstrate compliance with building envelope tightness requirements. Selection of the method of compliance shall occur when the Building Frame Inspection is scheduled. Below is a summary of the methods.

1. Third party visual inspection and testing with documentation required at time of final inspection.
2. RBD visual inspection and third party testing with documentation required at time of final inspection.

NOTE: The Simulated Performance and Energy Rating Index Alternatives requires third party inspections.

Pikes Peak REGIONAL Building Department

RESIDENTIAL HVAC EQUIPMENT CERTIFICATE - EL PASO COUNTY ONLY

Provide this certificate with heat loss, or optional heat gain, calculations for all new residential construction and additions. This form is part of the permanent record.

ADDRESS OR MASTER PLAN #: Carter3BR1S Habitat for Humanity

CALCULATIONS:

Duct Design New Structure Existing Structure Performance Test
 New Addition Only Existing Structure + New Addition (requires separate calculation for each)

1. Envelope heat loss _____ 15926 BTU/hr
2. Infiltration heat loss (.35 ach max) _____ 4289 BTU/hr
3. Envelope heat gain (optional) _____ BTU/hr
4. Infiltration heat gain (optional) _____ BTU/hr
5. Total heat loss (add lines 1 and 2)** _____ 20215 BTU/hr
6. Total heat gain (add lines 3 and 4 - optional) _____ BTU/hr
7. Type of heating appliance Bryant 912SC36040S17 forced air furnace New Existing
 BTU/hr input 37000 / 92.1 Location CRAWLER Area served ENTIRE HOUSE
8. Type of heating appliance _____ New Existing
 BTU/hr input _____ / _____ Location _____ Area served _____
9. Type of cooling appliance _____ New Existing
 BTU/hr input _____ / _____ Location _____ Area served _____
10. Type of cooling appliance _____ New Existing
 BTU/hr input _____ / _____ Location _____ Area served _____

SUMMARY:

- A. Input of heating appliance(s)* _____ 37000 BTU/hr
- B. Altitude derate (x .80) _____ 29600 BTU/hr
- C. Efficiency derate (output) _____ 27232 BTU/hr
- D. Electrical heating (1 watt = 3.413 BTU/hr) _____ BTU/hr
- E. **Total Heating Output**** _____ 27232 BTU/hr
- F. **Total Cooling** _____ BTU/hr

*If using high/low fired equipment, assign sum of the low fires on this line.

Applicant Signature EDWARD COYNE Date 2-22-2020
 Print name & company Colorado TruEnergy Solutions Phone 719-304-1887

IECC/IRC VENTILATION VERIFICATION (New Homes Only)

- Indicate method of compliance with **Whole-house Mechanical Ventilation System** (M1507.3) (check all that apply)

Outside Air/Supply Exhaust

- List **Fan Type/Description, CFM, and Location** of ALL exhaust fans, including kitchen hoods. Check box if fan is part of Whole-house Mechanical Ventilation System. (Example: Exhaust fan, 120 CFM, Master Bathroom)

Fantech SE704N ERV	60 cfm	(Capacity 61cfm)	<input checked="" type="checkbox"/>
Exhaust fan Bath room #2	50cfm		<input type="checkbox"/>
Kitchen Hood	400cfm		<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

- Indicate **Ventilation Control** (check one)
 Constant Intermittent: _____ % per Table M1507.3.3(2)
- Specify location of **Whole House Ventilation Manual Override Control Switch**, if known, otherwise note as **To Be Determined**.
Crawl Space (1,501-3000 sq ft with 3 bed rooms)= 60cfm